Curriculum Vitae

Thomas Reichler

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PROFESSIONAL EXPERIENCE

2004-date	Assistant Professor, Department of Meteorology, University of Utah, UT.
2003-2004	Visiting Scientist, Geophysical Fluid Dynamics Laboratory, Princeton, NJ.
1997-2003	Research Assistant, Scripps Institution of Oceanography, La Jolla, CA.
1996-1997	Research Assistant, Department of Atmospheric Sciences, Univ. of Illinois, IL.
1995-1996	Research Assistant, Institute for Atmospheric Physics, German Aerospace Center (DLR), Germany.
1993	Intern, German Remote Sensing Center (DFD), Oberpfaffenhofen, Germany.
1992	Intern, German Weather Service (DWD), Munich, Germany.

EDUCATION

2003	Ph.D. Oceanography, Scripps Institution of Oceanography, University of California, San Diego.
1996	M.S. (equivalent), Meteorology, University of Munich; Physical Geography, University of Augsburg, Germany.

TEACHING

2005-2007	Earth Climate System (METEO 6030), University of Utah.
2004-2007	Atmospheric Dynamics (METEO 6010), University of Utah.
2006	Case Studies in Computational Engineering (MATH 6790), “Numerical modeling of geophysical flow”, University of Utah.
2008	Advanced Large Scale Dynamics (METEO 6210), planned.
2006	Graduate Seminar (METEO 7810).
2004-date	Graduate Coordinator, University of Utah.
1998	Teaching Assistant, Introduction to Atmospheric Sciences (ES20), University of California.

STUDENT MENTORING

Graduate Students Supervised

Junsu Kim, Ph.D. candidate (2004-date)
Byoung-Cheol Kim, M.S. candidate (2005)
Paul Staten, Ph.D. candidate (2006-date)
Chris Pennell, Ph.D. candidate (2006-date)

Graduate Committees

Kantave Green, M.S. (2005-2006).

PROFESSIONAL SERVICE AND ACTIVITIES

Reviewer for

National Science Foundation
National Oceanic and Atmospheric Administration
Journal of Climate
Journal of the Atmospheric Sciences
Quarterly Journal of the Royal Meteorological Society
Journal of Geophysical Research
Geophysical Research Letters
Tellus-A
Atmospheric Science Letter

Member of

American Meteorological Society (1997-date)
American Geophysical Union (1997-date)
Royal Meteorological Society (2003-date)

UNIVERSITY SERVICE AND ACTIVITIES

2004-date	Department of Meteorology Graduate Coordinator.
2004-date	Department of Meteorology Representative to University's Graduate Director's meetings.
2005-2006	Department of Meteorology Member Representative to the University Corporation for Atmospheric Research.
2005-date	Computational, Engineering and Science (CES) Steering Committee.
2004-2006	College of Mines and Earth Sciences McGregor Library Committee.
2005-date	College of Mines and Earth Sciences Computer Committee.
2005-date	University of Utah Credits and Admissions Committee.

RESEARCH AND EDUCATIONAL SUPPORT

Current

"Structural changes in the tropical Hadley circulation: Past and future trends ", Thomas Reichler (Sole PI), NSF, $173,453, 12/05-11/07.

"Predictability of the Arctic oscillation from stratospheric coupling", Thomas Reichler (PI) and Arun Kumar (NCEP/NOAA), NOAA, $376,076 (Univ. of Utah portion $376,076), 6/06-5/09.

"Purchase of a rotating tank for classroom demonstrations", Thomas Reichler (Sole PI), University of Utah Teaching Grant, $3,000, 1/07-4/07.

"Measuring the global tropopause by satellite: uncertainties, structure, and variability", Thomas Reichler (PI), NASA Earth and Space Science Fellowship for Paul Staten, $24,000, 9/07-8/08.

HONORS AND AWARDS

2003-2004 Visiting scientist fellowship, GFDL, Princeton, NJ.
1998, 1997 AMS graduate student fellowship, annual AMS meeting.
1996 Thesis award, University of Augsburg, Germany (DM 3,000.-)
1978 Stiftung Jugend forscht (youth science foundation), 1st prize awarded.

PUBLICATIONS

Articles in preparation

Reichler, T., I. Held, and. K. Rosenlof (2007): Direct observational evidence for a widening of the tropical Hadley cell. *J. Clim.*

Reichler, T. and J. Kim (2007): Validating the present-day mean climate simulated by the IPCC AR4 models. *J. Clim.*

Submitted Articles

Seidel, D., Q. Fu, R. Randel, and T. Reichler (2007): Getting wider around the middle: Tropical belt is expanding as climate changes, *Nature-Geosciences*, (sub judice).

Reichler, T. and J. Kim (2007): How well do coupled models simulate present-day climate? A comparison of three generations of coupled models. *Bull. Amer. Meteor. Soc.*, (sub judice).

Reichler, T. and J. Kim (2007): Uncertainties in the climate mean state of global observations, reanalyses, and a modern climate model, *J. Geophys. Res.* (sub judice).

Refereed Articles

Lu, J., G. Vecchi, and T. Reichler (2007): Correction to "Expansion of the Hadley cell under global warming". *Geophys. Res. Lett.*, **34** (14), L14808.

Lu, J., G. Vecchi, and T. Reichler (2007): Expansion of the Hadley cell under global warming. *Geophys. Res. Lett.*, **34**, L06805.

Fu, Q., C. Johanson, J. Wallace, and T. Reichler (2006): Enhanced midlatitude tropospheric warming in satellite measurements. *Science*, **312**, 1179.

Reichler, T. and J. O. Roads (2005): Long-range predictability in the tropics. Part I: monthly averages. *J. Climate*, **18**, 619-633.

Reichler, T. and J. O. Roads (2005): Long-range predictability in the tropics. Part II: 30-60 days variability, *J. Climate*, **18**, 634-650.

Reichler, T., P. J. Kushner, and L. M. Polvani (2005): The coupled stratosphere-troposphere response to impulsive forcing from the troposphere, *J. Atmos. Sci*., **62** (9), 3337–3352.

Reichler, T. and J. O. Roads (2004): Time-space distribution of long-range atmospheric predictability. *J. Atmos. Sci.*, **61**, 249-263.

Reichler, T., M. Dameris, and R. Sausen (2003): Determination of tropopause heights from gridded data. *Geophys. Res. Lett.*, **30**, No. 20, 2042, doi: 10.1029/2003GL018240.

Roads, J., R. Lawford, E. Bainto, H. Berbery, B. Fekete, K. Gallo, A. Grundstein, W. Higgins, J. Janowiak, M. Kanamitsu, V. Lakshmi, D. Leathers, D. Lettenmaier, Q. Li, L. Luo, E. Maurer, T. Meyers, D. Miller, K. Mitchell, T. Mote, R. Pinker, T. Reichler, D. Robinson, A. Robock, J. Smith, G. Srinivasan, K. Vinnikov, T. von der Haar, C. Vorosmarty, S. Williams, and E. Yarosh (2002): GCIP Water and Energy Budget Synthesis (WEBS). *J. Geophys. Res.*, **108**, No. D16, 8609, doi:10.1029/2002JD002583.

Reichler, T. J. and J. O. Roads (2002): The role of boundary and initial conditions for dynamical seasonal predictability. *Nonlinear Processes in Geophysics*, **10**, 211.

Reports

Roads, J., R. Lawford, E. Bainto, H. Berbery, B. Fekete, K. Gallo, A. Grundstein, W. Higgins, J. Janowiak, M. Kanamitsu, V. Lakshmi, D. Leathers, D. Lettenmaier, Q. Li, L. Luo, E. Maurer, T. Meyers, D. Miller, K. Mitchell, T. Mote, R. Pinker, T. Reichler, D. Robinson, A. Robock, J. Smith, G. Srinivasan, K. Vinnikov, T. von der Haar, C. Vorosmarty, S. Williams, E. Yarosh, 2002: GCIP Water and Energy Budget Synthesis (WEBS). CD-ROM (available from GAPP program office).

Reichler, T. J., and J. O. Roads (2002): The Impact of Initial Conditions on the Time-Space Distribution of Long-Term Atmospheric Predictability, *Maui High Performance Computing Center, Application Briefs 2001*, Kihei, Hawaii.

Reichler, T. J., and J. O. Roads (2001): The Role of Initial and Boundary Conditions for Dynamical Seasonal Forecasting, *Maui High Performance Computing Center, Application Briefs 2001*, Kihei, Hawaii.

Schlesinger, M. E., N. G. Andronova, A. Ghanem, S. Malyshev, T. J. Reichler, E. Rozanov, W. Wang, and F. Yang (1997): Geographical Scenarios of Greenhouse-Gas and Anthropogenic-Sulfate-Aerosol Induced Climate Changes.

Reichler, T. J., M. Dameris, R. Sausen and D. Nodorp (1996): A global climatology of the tropopause height based on ECMWF-analyses, DLR Oberpfaffenhofen, Institute of Atmospheric Physics, 57, ISSN 0943-4771, 23 pp.

Proceedings and Talks

Reichler, T., J. Kim, and A. Kumar (2007): Short-term climate predictability associated with stratospheric influences in operational forecast systems. AGU Chapman conference on The Role of the Stratosphere in Climate and Climate Change, Santorini, Greece, September 24-28, 2007, (invited talk).

Reichler, T. and J. Kim (2007): How well do coupled models simulate present-day climate? *3rd WGNE Workshop on Systematic Errors in Climate and NWP Models*, San Francisco (CA), February 12-16, 2007, (poster).

Reichler, T., J. Lu, G. A. Vecchi, Q. Fu (2006): Expansion of the Hadley Cell: A Possible New Driver for Droughts? *American Geophysical Union Fall Meeting*, San Francisco (CA), December 14, (poster).

Reichler, T. and J. Kim (2006): How well do coupled models simulate present-day climate? *American Geophysical Union Fall Meeting*, San Francisco (CA), December 14, (poster).

Lu, J., G. Vecchi, and T. Reichler (2006): Expansion of the Hadley cell under global warming. *NOAA 31st Climate Diagnostics & Prediction Workshop*, Boulder (CO), October 25, (poster).

Reichler, T. and J. Kim (2006): How well do coupled models simulate present-day climate? *National Center for Atmospheric Research*, Boulder (CO), October 12, (seminar).

Reichler, T. and J. Kim (2006): How well do coupled models simulate present-day climate? *National Oceanographic & Atmospheric Association - Earth System Research Laboratory*, Boulder (CO), October 12, (seminar).

Reichler, T. and J. Kim (2006): How well do coupled models simulate present-day climate? A comparison of three generations of models. *Geophysical Fluid Dynamics Laboratory*, Princeton (NJ), August 14, (invited seminar).

Reichler, T. and J. Kim (2006): How well do coupled models simulate present-day climate? A comparison of three generations of models. *Goddard Institute for Space Studies*, New York (NY), August 15, (seminar).

Reichler, T. (2006): Climate change: Theory – Facts – Uncertainties. Invited guest lecture at the *University of Utah*, Department of Philosophy, April 11.

Reichler, T., and I. Held (2005): A possible widening of the tropical Hadley cell over the past decades, *AGU fall meeting*, Global Environmental Change session, December, (talk).

Kim, J., and T. Reichler (2005): A Performance Index for the Evaluation of Coupled Climate Models, *AGU fall meeting*, Global Environmental Change session, December, (poster).

Kim, J., and T. Reichler (2005): How well do models simulate observations? A critical appraisal of the latest generation of coupled climate models, *Department of Meteorology, University of Utah*, Salt Lake City, November, (seminar).

Reichler, T. (2005): An introduction to three-dimensional climate modeling, *Scientific Computing and Imaging Institute, University of Utah*, Salt Lake City, November, (invited seminar).

Reichler, T., and I. Held (2005): Widening trend of the Hadley cell Over the Past 40 Years, *Conference on Climate Variability and Change*, Cambridge, MA, June, (talk).

Reichler, T., P. J. Kushner, and L. M. Polvani (2005): The coupled stratosphere-troposphere response to impulsive forcing from the troposphere, Conference on Middle Atmosphere, Cambridge, MA, June, (poster).

Kushner, P. J., T. Reichler, and L. M. Polvani (2005): The coupled stratosphere-troposphere response to impulsive forcing from the troposphere, Canadian CLIVAR network meeting, Montreal, February, (talk).

Kushner, P. J., L. M. Polvani, and T. Reichler (2004): Extratropical stratosphere-troposphere dynamical coupling: Perspectives from a simple GCM, *AGU fall meeting*, December, (talk).

Reichler, T., I. Held (2004): Evidence for a Widening of the Hadley cell over the past 40 years, *Global Circulation of the Atmosphere*, Pasadena, CA, November, (poster).

Reichler, T. (2004): Long-range atmospheric predictability, *Department of Meteorology, University of Utah*, Salt Lake City, September, (seminar talk).

Reichler, T., P. J. Kushner, and L. M. Polvani (2004): The coupled stratosphere-troposphere response to impulsive forcing from the troposphere, *SPARC general assembly*, Victoria, CA, August, (poster).

Reichler, T., M. Dameris, R. Sausen (2004): Determination of tropopause heights from gridded data, *SPARC general assembly*, Victoria, CA, August, (poster).

Reichler, T., P. J. Kushner, and L. M. Polvani (2004): The coupled stratosphere-troposphere response to impulsive forcing from the troposphere, *Climate Prediction Center, NCEP-NOAA*, Camp Springs, MD, May, (invited seminar).

Reichler, T. (2004): The role of initial and boundary conditions for sub-seasonal predictability, *Global Modeling and Assimilation Office, Goddard Space Flight Center GSFC-NASA*, Greenbelt, MD, May, (invited seminar).

Reichler, T., P. J. Kushner, and L. M. Polvani (2004): The coupled stratosphere-troposphere response to impulsive forcing from the troposphere, *Global Modeling and Assimilation Office, Goddard Space Flight Center GSFC-NASA*, Greenbelt, MD, May, (invited seminar).

Reichler, T., P. J. Kushner, and L. M. Polvani (2004): The coupled stratosphere-troposphere response to impulsive forcing from the troposphere, *IGERT Joint Program in Applied Mathematics and the Earth & Environmental Sciences, Columbia University*, NY, May, (invited seminar).

Reichler, T. (2004): The role of initial and boundary conditions for sub-seasonal predictability, *Center for Ocean-Land-Atmosphere Studies COLA*, Calverton, MD, May, (invited seminar).

Reichler, T., P. J. Kushner, and L. M. Polvani (2004): Response of the stratosphere-troposphere system to impulsive topographic forcing, *EGU 1st General Assembly*, Dynamics of the Middle Atmosphere, Nice, April, (talk).

Reichler, T., and J. O. Roads (2004): The role of initial and boundary conditions for long-range atmospheric predictability, *Lamont-Doherty Earth Observatory*, Palisades, April, (invited seminar).

Reichler, T., P. J. Kushner, and L. M. Polvani (2004): Response of the stratosphere-troposphere system to impulsive forcing, *Atmospherics Physics Group, University of Toronto*, Toronto, March, (invited seminar).

Reichler, T. , P. J. Kushner, and L. M. Polvani (2003): Response of the stratosphere-troposphere system to impulsive forcing, *Geophysical Fluid Dynamics Laboratory*, Princeton, December, (seminar).

Reichler, T. , P. J. Kushner, and L. M. Polvani (2003): The response of the stratosphere-troposphere system to impulsive forcing, *Department of Meteorology, University of Utah*, Salt Lake City, October, (invited seminar).

Reichler, T. J., and J. O. Roads (2003): Predictability of the MJO, *EGS/AGU Joint Assembly*, Intraseasonal and seasonal climate predictability, Nice, April, (talk).

Reichler, T. J., and J. O. Roads (2003): Predictability and sensitivity of monthly means in the tropics, *EGS/AGU Joint Assembly*, Intraseasonal and seasonal climate predictability, Nice, April, (poster).

Reichler, T. J. (2002): Atmospheric Long-Range Predictability, *NOAA/Geophysical Fluid Dynamics Laboratory*, Princeton, NJ, June, (invited seminar).

Reichler, T. J., and J. O. Roads (2002): Atmospheric Long-Range Predictability, *National Institute for Water and Atmosphere*, Wellington, New Zealand, May, (invited seminar).

Reichler, T. J., and J. O. Roads (2002): The role of atmospheric initial conditions for long-range predictability. *Workshop on Prospects for improved Forecasts of Weather and Short-term Climate Variability on Subseasonal Time Scales, NASA/GSFC*, Greenbelt, MD, April, (talk).

Reichler, T. J., J. O. Roads, and M. Kanamitsu (2002): Dynamical Seasonal Predictions: Sensitivity to soil moisture and initial conditions. *82nd AMS annual meeting, 13th symposium on global climate change and climate variations*, Orlando, FL, January, (poster).

Reichler, T. J., J. O. Roads, and M. Kanamitsu (2001): Dynamical Seasonal Predictability. *ECPC meeting, Scripps Institution of Oceanography*, La Jolla, CA, December, (talk).

Reichler, T. J., J. O. Roads, and M. Kanamitsu (2001): The Role of Initial and Boundary Conditions for Dynamical Seasonal Forecasting. *26th Annual Climate Diagnostics and Prediction Workshop, Scripps Institution of Oceanography*, La Jolla, CA, October, (talk).

Reichler, T. J., J. O. Roads, and M. Kanamitsu (2001): The Role of Initial and Boundary Conditions for Dynamical Seasonal Forecasting. *ARCs network meeting, Scripps Institution of Oceanography*, La Jolla, CA, October, (talk).

Reichler, T. J., J. O. Roads, and M. Kanamitsu (2001): Seasonal Climate Predictability in a General Circulation Model. *European Geophysical Society XXVI General Assembly*, Nice, France, March, (talk).

Gershunov, A., T. J. Reichler and J. O. Roads (2001): Sources of Seasonal Predictability for Daily Precipitation Extreme Statistics Over the Eastern US, *AAG meeting 2001* (Association of American Geographers), NY March 3, (poster).

Gershunov, A., D. Cayan, T. J. Reichler and J. O. Roads (2001): Seasonal Predictability of Regional Hydrometeorology, *European Geophysical Society XXVI General Assembly*, Nice, France, (poster).

Reichler, T. J., J. O. Roads, and M. Kanamitsu (2001): The Role of Ocean Boundary Conditions for Seasonal Predictability, *Proceedings to the Symposium on Climate Variability, the Oceans and Societal Impacts*, Albuquerque, New Mexico, (poster).

Gershunov, A., T. J. Reichler, and J. O. Roads (2001): Sources of Seasonal Predictability for Daily Precipitation Extreme Statistics Over the Eastern US, *Proceedings to the Symposium on Climate Variability, the Oceans and Societal Impacts*, Albuquerque, New Mexico, (talk).

Reichler, T. J., J. O. Roads, and M. Kanamitsu (2000): Seasonal Predictability Studies with the NCEP Global Spectral Model. *ECPC meeting, Scripps Institution of Oceanography*, La Jolla, CA, December, (talk).

Reichler, T. J., J. O. Roads, and M. Kanamitsu (2000): Validation of the NCEP Global Spectral Model. *2nd international RSM workshop*, Maui, HI, July, (talk).

Reichler, T. J., J. O. Roads and S. Chen (2000): Seasonal predictions with the NCEP reanalysis-2 model: Initial value or boundary forced?" *ARCs/IRI meeting, Lamont-Doherty Earth Observatory*, Palisades, NY, March, (talk).

Roads, J. O., T. J. Reichler, S. Chen, M. Kanamitsu, and W. Ebisuzaki (1999): Surface water characteristics and influences in NCEP/DOE Reanalysis II. *Proceedings of the 2nd International Conference on Reanalysis*, Wokefield Park, United Kingdom, Aug. 23-27, (talk).

Chen, S., T. J. Reichler, and J. O. Roads, (1999): The NCEP reanalysis II model: Surface forcing characteristics and SST-sensitivity. *CORC Pacific Meeting, Scripps Institution of Oceanography*, La Jolla, CA, August, (talk).

Reichler, T. J., J. O. Roads, and M. Kanamitsu (1999): The NCEP reanalysis II model: Climatology, variability and SST sensitivity. *Workshop on extratropical SST anomalies, Climate Diagnostics Center*, Boulder, CO, June, (talk).

Reichler, T. J., J. O. Roads, M. Kanamitsu, S. Chen, and D. Cayan (1998): Surface fluxes in the NCEP/NCAR reanalysis GSM climate model and COADS. *CORC Pacific Meeting, University of California – San Diego*, La Jolla, CA, October, (talk).